Guillaume Dubach

Curriculum Vitae

École polytechnique, CMLS
Route de Saclay
91128 Palaiseau Cedex, France
guillaume.dubach@polytechnique.edu
https://guillaume-dubach.perso.cmls.polytechnique.fr/
ORCID 0000-0001-6892-8137

Personal information

Given names	Guillaume, Paul.
Family name	Dubach.
Born	17 September 1990, Metz, France.
Citizenship	French.
Family status	Married, three children.

Education and career

2023 –	**Monge Professor**, *École polytechnique*, Palaiseau, France
2022 – 2023	**FSMP postdoctoral fellow**, *École normale supérieure – PSL*, Paris, France
2020 – 2022	**ISTplus fellow**, *IST Austria*, Klosterneuburg, Austria
2019 – 2020	**Research Assistant**, *Baruch College, City University of New York*, USA
2014 – 2019	**PhD student**, *Courant Institute, New York University*, USA
2009 – 2014	**Élève fonctionnaire-stagiaire**, *École normale supérieure*, Paris, France
2007 – 2009	**Classes préparatoires MPSI–MP***, *Lycée Louis-le-Grand*, Paris, France

PhD thesis

Title *On integrable models of non-Hermitian random matrices.*
Advisor: Paul Bourgade. Defended on April 30, 2019.

Prizes and awards

2024	**Shiing-Shen Chern Young Faculty Award**, *Fondation de l'École polytechnique*
2019	**Wilhelm T. Magnus Memorial Prize**, *Courant Institute thesis prize* *'for significant contributions to the mathematical sciences'.*
2018	**Newman Fellowship**, *Courant Institute*

Book

P. Deift, G. Dubach, C. Tomei, T. Trogdon, *The Toda Lattice and Universality for the Computation of the Eigenvalues of a Random Matrix*, London Mathematical Society Lecture Note Series 500, Cambridge University Press (2025).

Published articles

G. Dubach, *Du bon usage des filtres*, Revue de la filière mathématique (RMS) 137-1 (2026). In French.

G. Dubach, *On the number of cycles in commutators of random permutations*, The Annals of Applied Probability 34(4), 4072–4084 (2024).

G. Dubach, J. Reker, *Dynamics of a rank-one multiplicative perturbation of a unitary matrix*, Random Matrices: Theory and Applications 13(2), 2450007 (2024).

G. Dubach, J. Reker, *Une brève histoire des perturbations non hermitiennes de rang un*, La Gazette de la Société Mathématique de France 182, 14–26 (2024). In French.

L.-P. Arguin, G. Dubach, L. Hartung, *Maxima of a random model of the Riemann zeta function over intervals of varying length*, Annales de l'Institut Henri Poincaré, Probabilités et Statistiques 60(1), 588–611 (2024).

T. Lucas, G. Dubach, *Counting Boiotians: Conscription Lists, Military Forces, and Demography in Hellenistic Boiotia*, Hesperia 92(3), 481–513 (2023).

G. Dubach, P. Germain, B. Harrop-Griffiths, *On the derivation of the homogeneous kinetic wave equation for a nonlinear random matrix model*, Ars Inveniendi Analytica, Paper No. 7 (2023).

G. Dubach, L. Erdős, *Dynamics of a rank-one perturbation of a Hermitian matrix*, Electronic Communications in Probability 28, 1–13 (2023).

G. Dubach, *Explicit formulas concerning eigenvectors of weakly non-unitary matrices*, Electronic Communications in Probability 28, 1–11 (2023).

A. Serebryakov, N. Simm, G. Dubach, *Characteristic polynomials of random truncations: moments, duality and asymptotics*, Random Matrices: Theory and Applications 12(1), 2250049 (2023).

G. Dubach, *On eigenvector statistics in the spherical and truncated unitary ensembles*, Electronic Journal of Probability 26, 1–29 (2021).

G. Dubach, Y. Peled, *On words of non-Hermitian random matrices*, The Annals of Probability 49(4), 1886–1916 (2021).

G. Dubach, *Symmetries of the quaternionic Ginibre ensemble*, Random Matrices: Theory and Applications 10(1), 2150013 (2021).

P. Bourgade, G. Dubach, *The distribution of overlaps between eigenvectors of Ginibre matrices*, Probability Theory and Related Fields 177, 397–464 (2020).

G. Dubach, *Powers of Ginibre eigenvalues*, Electronic Journal of Probability 23, 1–31 (2018).

Submitted Preprints

G. Dubach, A. Fares, L. Thomas, *On stability of outliers from the circular law*, arXiv:2606.16609 (2026).

G. Dubach, H.A. Mai, *On a random matrix proof of a bipartite Harer–Zagier formula*, arXiv:2606.05430 (2026).

L. Benigni, S. Coste, G. Dubach, *The delocalization of eigenvectors of real elliptic matrices*, arXiv:2602.10264 (2026).

P. Bourgade, G. Dubach, L. Hartung, A. Keles, *Fisher–Hartwig asymptotics for non-Hermitian random matrices*, arXiv:2512.09123 (2025).

Responsibilities

2026 – Co-organizer (with Pascale Harinck, Alain Plagne and Claude Sabbah) of the Journées mathématiques X-UPS, an annual training event for preparatory-class teachers.

2025 – Co-head (with Ruben Minasian) of the Mathematical Physics program of the Fondation Mathématique Jacques Hadamard (FMJH).

2025 – Coordinator at École polytechnique of the ANR project TAGADA (*Tenseurs aléatoires en grande dimension et applications*).

2025 – Member of the ANR project NO-LIMIT (*Non-Linéarité, HaMIltoniens et Turbulences*).

2024 – Co-organizer of the seminar Matrices et Graphes Aléatoires (MEGA).

May 2024 Co-organizer of the conference TURBULENT.E.S at École polytechnique.

April 2024 Co-organizer of a CMAP/CMLS/CPHT thematic day on random matrices at École polytechnique.

2021 – 2022 Pre-screening of PhD applications at IST Austria.

2015 – 2019 Co-organizer of the Student Probability Seminar at NYU.

Teaching

2025 – FMA_52184: *Introduction to Random Matrix Theory*, École polytechnique, engineering program, 3rd year (13 students in 2025).

2024 – FMA_2F001: *Linear Algebra II*, École polytechnique, Bachelor of Science, 2nd year (168 students in 2024).

2024 FMA_3F013: *Complex Analysis*, École polytechnique, Bachelor of Science, 3rd year (70 students).

2023 MAA201: *Linear Algebra II*, École polytechnique, Bachelor of Science, 2nd year (150 students).

2021 – 2022 *Probability and Statistics for life scientists*, IST Austria.

2016 – 2019 Teaching assistant for various courses, New York University.

2010 – 2013 Oral examiner (*colles*) in MPSI and MP*, Lycée Louis-le-Grand, Paris.

Supervision

Oct. 2026 – PhD: Domitille Saliou.

2025 Postdoc: Stéphane Dartois.

2024 – PhD: Aniss Fares (co-supervised with Alice Guionnet).

2026 Master 2 thesis: Roberto Bolzan.

2026 Three bachelor theses (Hai An Mai, Divita Singh, Lilou Thomas; L. Thomas received the 2026 Maryam Mirzakhani Junior Prize).

2025 Five bachelor theses (Gaïa Bensouda-Korachi, Alexa Dias Ferreira, Ruben Harutyunyan, Clémence Moullet, George-Ioan Stoica; C. Moullet received the 2025 Maryam Mirzakhani Junior Prize).

2025 Research discovery project (Helena Huynh, Alizée Marquardt, Maëlle Ranouil).

2024 Nine laboratory research projects (Gaïa Bensouda-Korachi, Robert Debbas, Raphaël Delpirou, Giselle Feng, Ruben Harutyunyan, Lucas Massot, Cenzo Poirier de Carvalho, Ioana Popescu, George-Ioan Stoica).

2022 Research project within the PhD of Jana Reker (IST Austria).

Outreach

2025 – Organization of the Polymath summer school.

2026 Talk at the *Mathematic Park* seminar (Institut Henri Poincaré).

2026 Talk at the final of the TFJM^2 (French Tournament of Young Mathematicians), ENS Paris-Saclay.

2026 Participation in the Programme Poincaré and the XScience Camp, organized by the Pôle Égalité des chances of École polytechnique.

2025 Private lesson for the Fondation de l'X.

2025 Master class for applicants to the Bachelor of Science of École polytechnique.

2024 Geometry discovery activities at école Paul Antin, Bordeaux.

2023 Co-organization and scientific supervision of the public-speaking contest *Science en voix*, lycée Gustave Eiffel, Bordeaux.

2021 Scientific talk for the summer interns of IST Austria.

2017 Two talks at C-Splash, Courant Institute (NYU).

Referee for

- *The Annals of Probability*
- *The Annals of Applied Probability*
- *Electronic Journal of Probability*
- *Electronic Communications in Probability*
- *Annales de l'Institut Henri Poincaré*
- *Geometric and Functional Analysis*
- *Proceedings of the Royal Society A*
- *Journal of Physics A*
- *Journal of Automated Reasoning*
- *Random Matrices: Theory and Applications*
- *Mathematische Zeitschrift*
- *Electronic Research Archive*

Invited talks (selection)

2026 **Brunel University**, *Brunel–Bielefeld Workshop on Random Matrix Theory*, speaker

2025 **CMAP, École polytechnique**, *Séminaire du pôle Probabilités*, speaker

2023 **Université Paris-Saclay (Orsay)**, *Probability Seminar*, speaker

2023 **Institut Henri Poincaré**, *Séminaire Matrices et Graphes Aléatoires*, mini-course

2023 **LPSM, Jussieu**, *Seminar Les Probas du vendredi*, speaker

2022 **Brunel University**, *XVIII Brunel–Bielefeld Workshop on Random Matrix Theory*, speaker

2022 **École normale supérieure**, *Journées de rentrée*, speaker

2022 **Université de Bordeaux**, *Probability Seminar*, speaker

2022 **Université de Lille**, *Workshop Random matrices meet random permutations*, speaker

2022 **Universität Bielefeld**, *Bielefeld–Melbourne online Random Matrices Seminar*, speaker

2021 **Institut Henri Poincaré**, *Séminaire Matrices et Graphes Aléatoires*, speaker

2021 **LPSM, Sophie Germain**, *Modélisation working group*, speaker

2020 **University of California San Diego**, *Probability Seminar*, speaker

2020 **TU Wien**, *Vienna Probability Seminar*, speaker

2020 **Oberwolfach**, *Universality: Random Matrices, Random Geometry and SPDEs*, invited participant (event canceled)

2020 **Georgia Tech**, *Stochastics Seminar*, speaker (canceled)

2020 **Binghamton University**, *Analysis Seminar*, speaker

2019 **Binghamton University**, *AMS session Stochastic Evolution of Discrete Structures*, speaker

2019 **City University of New York**, *Probability Seminar*, speaker

2019 **IST Austria**, *Mathphys Analysis Seminar*, speaker

2019 **Institut Henri Poincaré**, *Séminaire Matrices et Graphes Aléatoires*, speaker

2019 **New York University**, *Probability Seminar*, speaker

2019 **Temple University**, *Temple/Penn Probability Seminar*, speaker

2019 **MIT**, *Probability Seminar*, speaker

2018 **New York University**, *Northeast Probability Seminar*, junior speaker